ADDENDUM NUMBER 2

COUNTY TRUNK RADIO INSTALLATION
AT GREENFIELD AT&T TOWER
5300 West Layton Avenue
Greenfield, WI 53220

Project Number: O620-10653

Date of Addendum: November 23, 2010

This Addendum to the Contract Documents is issued to modify, explain or correct the original documents, dated November 5, 2010, and is hereby made part of the Contract Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form, or bid may be rejected.

BIDDING DOCUMENTS

Change Bid Due Date to December 1, 2010 at 2:00 P.M.

DRAWINGS

Delete Drawings E-1 and E-2 dated 11/09/10 that were issued with Addundum No. 1 and Replace with Drawings E-1 and E-2 that has the revision date 11/18/10 and described as Addendum #2.

End of Addendum No. 2

MATCH LINE A →

PANELBOARD SCHEDULE

PANEL UPS/2 VOLTAGE 208/120V, 1Ø, 3W AIC 10K

☐ FLUSH ■ SURFACE ■ MAIN 80A ☐ MLO ■ GROUND BUS ☐ ISOLATED GROUND BUS BUS 100A ☐ FEED THRU

REMARKS:

CIR #	C/B SIZE	DESCRIPTION	LOAD KVA	LOAD A Ø KVA	LOAD B Ø KVA	LOAD KVA	DESCRIPTION	C/B SIZE	CIR #
1	20	▲1	0.2	0.4		0.2	▲2	20	2
3	20	▲1	0.2		0.4	0.2	▲2	20	4
5	20	▲1	0.2	0.4		0.2	▲2	20	6
7	20	▲1	0.2		0.4	0.2	▲2	20	8
9	20	▲1	0.2	0.4		0.2	▲2	20	10
11	20	▲1	0.2		0.4	0.2	▲2	20	12
13	20	▲1	0.2	0.4		0.2	▲2	20	14
15	20	▲1	0.2		0.4	0.2	▲2	20	16
17	20	▲3	0.2	0.2			SPARE	20	18
19	20	▲3	0.2		0.2		SPARE	20	20
21	20	▲3	0.2	0.2			SPARE	20	22
23	20	▲3	0.2		0.2		SPARE	20	24
25	20	▲3	0.2	0.2			SPARE	20	26
27	20	▲3	0.2		0.2		SPARE	20	28
29	20	SPARE					SPARE	20	30
31	20	SPARE					SPARE	20	32
33									34
35									36
37									38
39									40
41									42
		TOTALS		2.2	2.2				
		TOTAL CONNECT, KVA		4.4					

PANELBOARD SCHEDULE NOTES:
EACH SINGLE POLE CIRCUIT BREAKER SHOWN WILL REQUIRE A DEDICATED NEUTRAL WIRE.

ABBREVATIONS LIST

A	AMP
ACT	ABOVE COUNTER TOP
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AQ	AQUASTAT
AS	AS SHOWN
AU	AT UNIT
B,JB	JUNCTION BOX
BCP	BOILER CONTROL PANEL
BD#	BUS DUCT, # INDICATES BUS DUCT DESIGNATION
BFG	BELOW FINISHED GRADE
BOL	BUILT-IN OVERLOAD
C	CONTACTOR
CB, C/B	CIRCUIT BREAKER(S)
CCB	COMBINATION CIRCUIT BREAKER FULL VOLTAGE STARTER
CDT	CONDUIT
CEF	CEILING EXHAUST FAN
CF	COMBINATION FUSIBLE FULL VOLTAGE STARTER
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CS	COMBINATION STARTER
CU	COPPER
CUH	CABINET UNIT HEATER
D, DS	DISCONNECT SWITCH
DM	DOOR MANUFACTURER
DN	DOWN
DRWGS	DRAWINGS
E, EC, X	BY ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EM	EMERGENCY
EP	EXPLOSION PROOF
ET	ELAPSED TIMER
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WALL HEATER
EX	EXISTING
F	FURNISHED BY
FS	FLOW SWITCH
FZS	FREEZESTAT
G, GFI	GROUND FAULT INTERRUPTER TYPE
GC	PROJECT GENERAL CONTRACTOR
GND, GRND	GROUND
GS	MAGNETIC STARTER
GV	GATE VALVE
H, HV	HEATING/VENTILATING CONTRACTOR
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSEPOWER
I	INSTALLED BY
IL	INTERLOCK
IS	IN STARTER COVER
IU	IN UNIT
KS	KEY SWITCH
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LD	LOAD (KW OR HP)
LVT	LINE VOLTAGE THERMOSTAT (120V)
MCB	MAIN CIRCUIT BREAKER
MD	MOTORIZED DAMPER
MFR	MANUFACTURER
MG	MOTOR GENERATOR
MLO	MAIN LUGS ONLY
MR#	MULTI-RECEPTACLE, # INDICATES MULTI-RECEPTACLE DESIGNATION
MS	MANUAL STARTER
MSB	MAIN SWITCHBOARD
MSP	MANUAL SWITCH WITH PILO
MT	EMPTY
MTD	MOUNTED
NC	NEAR CIRCULATOR (REFER PLUMBING DRWGS FOR EXA
NIC	NOT IN CONTRACT
NP	NEAR PUMP (REFER TO HVAC DRWGS FOR EXACT LOCA
NTS	NOT TO SCALE
NU	NEAR UNIT (REFER TO HVAC DRWGS FOR EXACT LOCA
OOS	ON-OFF SWITCH
OU	ON UNIT
P#	PHOTOCELL, # INDICATES P DESIGNATION
PBL	PUSH BUTTON WITH PILOT
PBS	PUSH BUTTON STATION
PC	PLUMBING CONTRACTOR
PCP	PRE-WIRED CONTROL PANE
PE	PNEUMATIC ELECTRIC SWI
PEC	PROJECT ELECTRICAL CON
PL	PILOT LIGHT
PRV	POWER ROOF VENTILATOR
PW	PART WINDING STARTER
R	RECEPTACLE
RAF	RETURN AIR FAN
RAI	REMAIN AS IS
RAT	REVERSE ACTING THERMO
RVS	REDUCED VOLTAGE STARTI
S	STERILIZER
SAV	SOLENOID AIR VALVE
SC	STERILIZER CONTROLS
SF	SUPPLY FAN
SP	SHOCK-PROOF
SPC	SPACE
SPR	SPARE
SPS	SELECTOR SWITCH
SS	SPEED SWITCH
SSP	START-STOP WITH PILOT LI
STAT	THERMOSTAT
SVS	SUPERVISORY SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME CLOCK
TCC	TEMPERATURE CONTROL C
TCP	TEMPERATURE CONTROL P
TL#	TRACKLIGHT, # INDICATES LIGHT DESIGNATION
TO	TYPICAL OUTLET
TS	TAMPER SWITCH
TV	TELEVISION
UFD	UNDERFLOOR DUCT
UG	UNDERGROUND
UGD	UNDERGROUND DUCT
UH	UNIT HEATER
UO	UNIQUE OUTLET
UOI	UNLESS OTHERWISE INDIC
USS	UNIT SUBSTATION
V	VENDOR SUPPLYING EQUIP
W	WIRED BY
W/	WITH
WP	WEATHERPROOF
WT	WIRING TROUGH
XFMR	TRANSFORMER

SPECIAL OUTLET SCHEDULE -

General Drawing Symbol - ▲

MARK TO	MARK UO	EQUIPMENT SERVED TYPE	LOC.	ELECTRICAL CHARACTER HP	KW	AMPS	VOLT	Ø	PWR. SOURCE PANEL	PWR. SOURCE C/B	TERMINAL R	TERMINAL D	TERMINAL B	SO NOTE
	1	TRANSTECTOR PANEL (BY OWNER)	SEE PLANS			(8) 20	120	1	UPS/2	1,3,5,7, 9,11,13, 15				SO-1 SO-2
	2	TRANSTECTOR PANEL (BY OWNER)	SEE PLANS			(8) 20	120	1	UPS/2	2,4,6,8, 10,12, 14,16				SO-1 SO-2
	3	TRANSTECTOR PANEL (BY OWNER)	SEE PLANS			(6) 20	120	1	UPS/2	17,19, 21,23, 25,27				SO-1 SO-2

ABBREVIATIONS: TO: TYPICAL OUTLET (CIRCUITING PER SUBSCRIPT ON THE DRAWINGS). UO: UNIQUE OUTLET (CIRCUITING PER SCHEDULE ABOVE).

TERMINAL TYPE: R: DENOTES RECEPTACLE. D: DENOTES UNFUSED DISCONNECT B: DENOTES JUNCTION BOX PEC TO VERIFY TYPE IN EACH CASE

SPECIAL OUTLET SCHEDULE NOTES:
SO-1: TERMINATE WIRING FOR EACH CIRCUIT ON TERMINAL BLOCK PROVIDED WITHIN ENCLOSURE.
SO-2: COORDINATE EXACT LOCATION OF EQUIPMENT WITH OWNER PRIOR TO BEGINNING THIS WORK. (2)

DEMOLITION NOTES

1. FIELD VERIFY AND CHECK THE EXACT LOCATI AND NUMBERS OF ALL THE DEVICES AND EQU BE REMOVED.
2. COORDINATE ALL REMOVAL WORK WITH NEW CONSTRUCTION.
3. DEMOLITION SHOWN ON RISER DIAGRAM. SEE ELECTRICAL LOCATION PLANS FOR EQUIPMEN LOCATIONS IN THESE AREAS.
4. DISPOSE OF ALL REMOVED ELECTRICAL DEVI OTHERWISE REQUESTED BY OWNER. VERIFY TO REMAIN PROPERTY OF THE OWNER. COND WIRING & MISC. ELECTRICAL SCRAP SHALL BE FROM THE JOB SITE.
5. CHECK FOR PROPER OPERATION OF ALL EXIS OR SYSTEMS THAT ARE TO BE RELOCATED OF REPAIR IF NEEDED.
6. SPECIAL ATTENTION SHOULD BE PAID TO MAI RADIO BUILDING MECHANICAL AND ELECTRIC NO OUTAGES ARE ALLOWED.

← MATCH LINE A

FEEDER SCHEDULE

No.	FEEDER AMPACITY	CONDUCTOR SIZE		CONDUIT SIZE	
		Ø & NEUTRAL	GROUND	3, 3G, 1, 1G	4, 4G
1	20	#12	#12	3/4"	3/4"
2	30	#10	#10	3/4"	3/4"
3	50	#6	#10	3/4"	1"
4	60	#6	#10	1"	1"
5	80	#4	#8	1-1/4"	1-1/4"
6	100	#3	#8	1-1/4"	1-1/4"
7	110	#2	#6	1-1/4"	1-1/2"
8	125	#1	#6	1-1/2"	2"
9	150	#1/0	#6	1-1/2"	2"
10	175	#2/0	#6	2"	2"
11	200	#3/0	#6	2"	2-1/2"
12	225	#4/0	#4	2"	2-1/2"
13	250	250	#4	2-1/2"	3"
14	300	350	#4	3"	3"
15	400	500	#3	3"	3-1/2"
16	450	(2) #4/0	(2) #2	(2) 2"	(2) 2-1/2"
17	500	(2) 250	(2) #2	(2) 2-1/2"	(2) 3"
18	600	(2) 350	(2) #1	(2) 3"	(2) 3"
19	700	(2) 500	(2) #1/0	(2) 3"	(2) 3-1/2"
20	800	(2) 500	(2) #1/0	(2) 3-1/2"	(2) 4"
21	1000	(3) 500	(3) #2/0	(3) 3"	(3) 3-1/2"
22	1200	(3) 600	(3) #3/0	(3) 3-1/2"	(3) 4"
23	1600	(4) 600	(4) #4/0	(4) 3-1/2"	(4) 4"
24	2000	(5) 600	(5) 250	(5) 3-1/2"	(5) 4"
25	2500	(6) 600	(6) 350	(6) 3-1/2"	(6) 4"
26	3000	(8) 500	(8) 400	(8) 3-1/2"	(8) 3-1/2"
27	4000	(10) 600	(10) 500	(10) 3-1/2"	(10) 4"

FEEDER SCHEDULE NOTES:

1. THE ABOVE FEEDER SCHEDULE IS A SCHEDULE OF TYPICAL FEEDERS AND NOT ALL SIZES MAY BE UTILIZED.
2. FEEDER SIZES SHOWN ON THE RISER DIAGRAM INDICATE FEEDER AMPACITIES AND DO NOT NECESSARILY CORRESPOND TO CIRCUIT BREAKER AMPACITIES. CERTAIN FEEDERS MAY BE SIZED FOR DERATION FACTORS REQUIRED BY CODE AND/OR ARE OVERSIZED FOR VOLTAGE DROP.
3. ALL FEEDERS SHALL BE 3Ø, 4W, & GROUND (4G) UNLESS OTHERWISE NOTED WITH THE FOLLOWING SYSTEM DESCRIPTIONS:
   - (1) - 1Ø, 2W.
   - (1G) - 1Ø, 2W. & GROUND
   - (3) - 3Ø, 3W.
   - (3G) - 3Ø, 3W. & GROUND
   - (4) - 3Ø, 4W.

EXISTING PROJECT CONDITIONS

INFORMATION RELATIVE TO EXISTING PROJECT CONDITIONS, SUCH AS PRESENT LOCATIONS OF ARCHITECTURAL AND STRUCTURAL BUILDING COMPONENTS, MECHANICAL AND ELECTRICAL EQUIPMENT, PIPING, DUCTWORK, AND OTHER MISCELLANEOUS CONSTRUCTION, APPEARS ON THESE DRAWINGS. WHILE SUCH INFORMATION HAS BEEN BASED ON AVAILABLE RECORDS AND COLLECTED WITH REASONABLE CARE, THE ARCHITECT AND ENGINEER DO NOT ASSUME ANY EXPRESSED OR IMPLIED GUARANTEE THAT CONDITIONS AS INDICATED ARE SHOWN ENTIRELY COMPLETE, CORRECT AND REPRESENTATIVE OF THOSE ACTUALLY EXISTING. ALL CONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL EXISTING JOB CONDITIONS PRIOR TO BIDDING AND SHALL FIELD VERIFY ALL DIMENSIONS SHOWN HEREIN.

ONE-LINE DIAGRAM SYMBOLS

	RACEWAY WIRE CONNECTIONS
	JUNCTION OF CONNECTION
	CIRCUIT BREAKER
	FUSE
	FUSIBLE SWITCH
	DISCONNECT SWITCH
	GROUND FAULT FUSIBLE SWITCH
	3-PHASE, 4-WIRE, WYE, GROUNDED NEUTRAL
△	3-PHASE, 3-WIRE, DELTA
(M)	METER
A	PANELBOARD (DIAGRAMMATIC)
	TRANSFORMER
	POTENTIAL TRANSFORMER
	IN-LINE TRANSFORMER
	MOTOR
	SPECIAL PURPOSE OUTLET
⊠	JUNCTION BOX
	GROUND
	MOTOR STARTER - COMBINATION FUSIBLE
	MOTOR STARTER - COMBINATION CIRCUIT BREAKER
	PLUG / RECEPTACLE
	FLEXIBLE CONNECTION TO EQUIPMENT
	AUTOMATIC TRANSFER SWITCH
G	GENERATOR

ONE-LINE DIAGRAM SYMBOLS NOTES

ALL SYMBOLS IN LIST MAY NOT BE USED IN DRAWING

225 / SPHA — AMPERE RATING / C/B OR FUSE TYPE

SYMBOLS - NOTES

———	ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW.
———	ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN.
– – –	ALL ITEMS INDICATED BY A BOLD DASHED LINE ARE EXISTING TO BE REMOVED.
– · –	ALL ITEMS INDICATED BY A DASH-DOT-DASH LINE ARE TYPICAL EQUIPMENT DIVISIONS.

BY:

DATE: 11/18/10 — REVISION DESCRIPTION: ADDENDUM #2

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
Architecture, Engineering & Environmental Services Section
CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208

DRAWN BY: JRH | CHECKED BY: JRH
SCALE: N.T.S. | DATE: 11/09/10

PROJECT TITLE: GREENFIELD PUBLIC LIBRARY ADDITIONAL RADIO EQUIPMENT

SHEET DESCRIPTION: ELECTRICAL SCHEDULES AND DETAILS

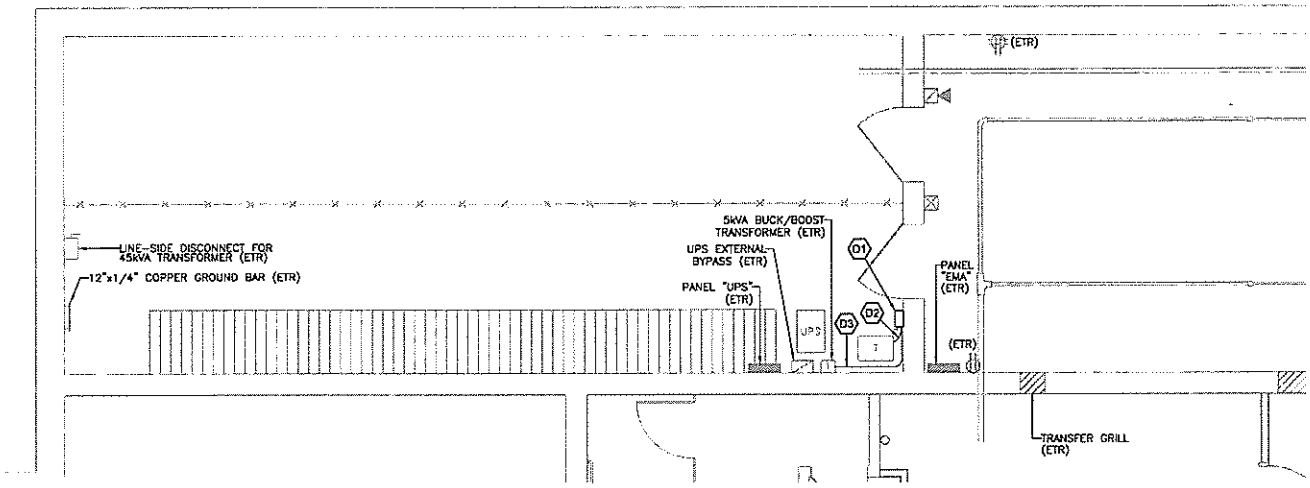
SITE NO. — | BUILDING NO. —

PROJECT NO. 0620-10653

SHEET NO. 1 OF 3 | E-1 | FILE NO.

LPA # 7958
LEEDY & PETZOLD ASSOCIATES, LLC
Consulting Electrical Engineers/Planners
12970 W. Bluemound Road - Suite 101
Elm Grove, Wisconsin 53122
Ph. (262) 860-1544, Fax (262) 860-1566

MATCH LINE B →

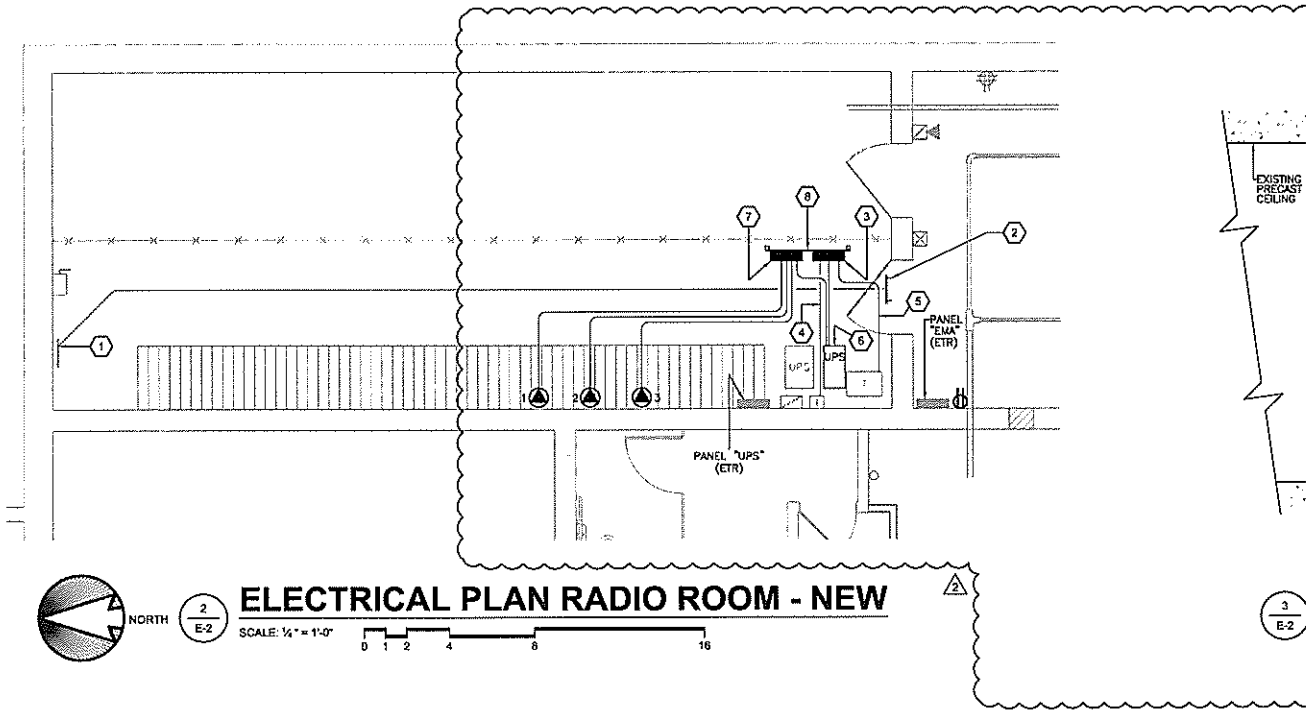


NORTH (1/E-2)

ELECTRICAL PLAN RADIO ROOM - EXIS

SCALE: ¼" = 1'-0"

0 1 2 4 8 16



NORTH (2/E-2)

ELECTRICAL PLAN RADIO ROOM - NEW

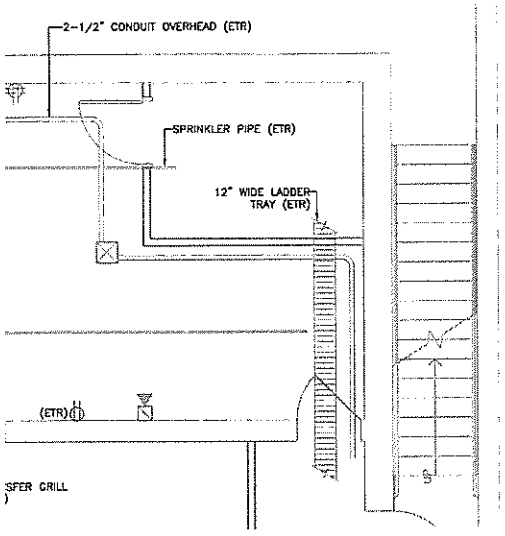
SCALE: ¼" = 1'-0"

0 1 2 4 8 16

2

3/E-2

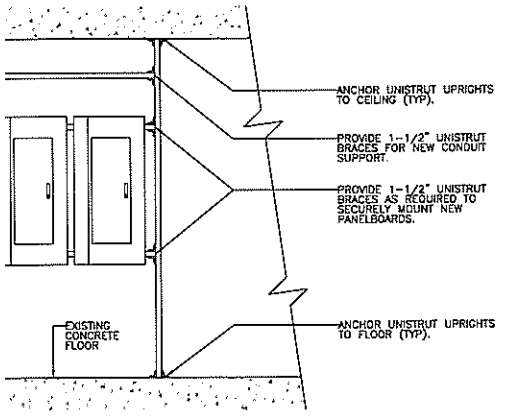
← MATCH LINE B



DEMOLITION SHEET NOTES

- (D1) EXISTING DISCONNECT SWITCH TO BE DEMOLISHED. SEE ONE-LINE DIAGRAM FOR MORE INFORMATION.
- (D2) REMOVE EXISTING SECONDARY FEEDER TO DISCONNECT SWITCH. FEEDER IS (3) #3 & (1) #8G IN 1-1/4" FMC.
- (D3) REMOVE EXISTING FEEDER BETWEEN LOAD-SIDE OF DISCONNECT SWITCH AND 5kVA BUCK/BOOST TRANSFORMER. FEEDER IS (2) #10 & (1) #10G IN 1/2" FMC.

NG CONDITIONS / DEMOLITION



NISTRUT MOUNTING DETAIL

SCALE

NEW PLAN SHEET NOTES

1. EXISTING GROUNDING SYSTEM TO BE EXTENDED AS SHOWN. EXISTING GROUND BAR IS CURRENTLY FULL AND SERVED WITH A #3/0 AWG COPPER TERMINATING ON A SINGLE LUG. REPLACE SINGLE LUG WITH A LUG CAPABLE OF TERMINATING (2) #3/0 AWG CONDUCTORS. RE-MOUNT LUG TO EXISTING GROUND BAR AND RE-TERMINATE INCOMING #3/0 AWG. CONNECT NEW #3/0 COPPER CONDUCTOR TO SPARE LUG AND EXTEND TO NEW GROUND BAR INDICATED BY NOTE #2. NEW CABLE SHALL BE ROUTED THROUGH NON-METALLIC CONDUIT UTILIZING SOFT BENDS. METALLIC FASTNERS AND COUPLERS SHALL NOT BE ACCEPTABLE.
2. PROVIDE NEW 12"x2"x1/4" COPPER GROUND BAR MOUNTED ABOVE DOOR IN RADIO ROOM SPACE. USE 2" INSULATORS TO STAND BAR OFF OF WALL. BAR SHALL BE PRE-DRILLED TO ACCOMMODATE (8) 2-HOLE COMPRESSION LUGS. REFER TO NOTE #1 FOR GROUNDING CONDUCTOR REQUIREMENTS.
3. NEW PANEL "LEQ/1" TO SERVE NEW EQUIPMENT AND BACKFEED EXISTING UPS AND PANEL. SEE ONE-LINE DIAGRAM FOR MORE INFORMATION. MOUNT SUCH THAT TOP OF PANEL IS BELOW TRANSFER GRILL.
4. RE-FEED EXISTING BUCK/BOOST TRNASFORMER FROM NEW PANEL "LEQ/1". PROVIDE (3) #10 AWG IN 3/4" EMT CONDUIT.
5. FEED NEW PANEL "LEQ/1" FROM SECONDARY OF TRANSFORMER. PROVIDE (3) #1/0 & (1) #6 AWG IN 2" EMT. FLEXIBLE METALLIC CONDUIT IS ACCEPTABLE FOR FINAL 18" AT TRANSFORMER TERMINATION ONLY.
6. EXISTING UPS TO BE RELOCATED FROM ANOTHER SITE. INSTALL AND CONNECT AS SHOWN ON ONE-LINE DIAGRAM. E.C. SHALL COORDINATE DISCONNECTION/REMOVAL FROM CURRENT SITE AND REINSTALLATION IN NEW RADIO ROOM.
7. NEW PANEL "UPS/2" TO BE INSTALLED AND WIRED PRIOR TO DISCONNECTING UPS FROM CURRENT SITE TO MINIMIZE DOWNTIME.
8. NEW UNISTRUT FRAME BY E.C. ANCHOR STRUT UPRIGHTS TO FLOOR AND CEILING. CEILING CONSISTS OF PRECAST PLANKING. SEE DETAIL "3/E-2" FOR MORE INFORMATION. MOUNT NEAR THE EXISTING FENCE AS TIGHT AS POSSIBLE TO ALLOW FOR MAXIMUM PANELBOARD CLEARANCE BEHIND DOOR.

DATE:	REVISION DESCRIPTION:	BY:
11/18/10	ADDENDUM #2	

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
Architecture, Engineering & Environmental Services Section
CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208

DRAWN BY: JRH
CHECKED BY: JRH
SCALE: 1/4" = 1'-0"
DATE: 11/09/10
PROJECT TITLE: GREENFIELD PUBLIC LIBRARY ADDITIONAL RADIO EQUIPMENT
SHEET DESCRIPTION: ELECTRICAL PLAN PUMP ROOM
SITE NO.: ---
BUILDING NO.: ---
PROJECT NO.: 0620-10653
SHEET NO.: 2 OF 3
E-2
FILE NO.

LPA #7956

LEEDY & PETZOLD ASSOCIATES, LLC
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